BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF HAWAII

In the Matter of the Application of	)	PUC Docket 03-0417
	)	
HAWAIIAN ELECTRIC COMPANY, INC. for	)	
	)	
Approval to commit funds in excess of	)	
$500,000 for Item Y48500,	)	
East Oahu Transmission Project	)	
	)	

LIFE OF THE LAND'S

MOTION TO INTERVENE

&

CERTIFICATE OF SERVICE

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January 6, 2004

Aloha Commissioners:

A) On December 18, 2004, Hawaiian Electric ("HECO") filed a document with the Public Utilities Commission ("Commission"; "PUC") titled "In the Matter of the Application of HAWAIIAN ELECTRIC COMPANY, INC. for approval to commit funds in excess of $500,000 for Item Y48500, East Oahu Transmission Project" ("EOTP"; "Kamoku-Pukele").

B) HECO's Kamoku-Pukele project is the granddaddy of all Hawaii energy fights, raging over 32 years. HECO has given the project over a dozen names, including Kamoku-Pukele (1971-85) and Pukele-Kamoku (1991-2002)[1]; filed three Conservation District Use Applications (CDUAs) with the Department of Land and Natural Resources (DLNR);[2] and submitted four Draft Environmental Impact Statements,[3] including the largest in state history (in response to record levels of written opposition).

C) Community opposition to the proposed line has been fierce. The **Palolo Community Council** wrote a letter to the Governor, the Board of Land and Natural Resources ("BLNR"), and the PUC, dated June 20, 1979: "Enclosed please find the

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[1]The proposal has also been designated: (1) Archer-Kewalo-Kamoku-Pukele 138-kV Transmission Line; (2) Archer-Pukele 138-kV Transmission Line Phase 3; (3) CDUA OA 4-2-75--657 Pukele Kamoku; (4) CDUA OA 2793 Kamoku-Pukele; (5) CDUA OA 2801 Kamoku-Pukele; (6) East Oahu 138-kV Transmission Line Phase 3; (7) East Oahu Transmission Project; (8) Halawa-Kamoku 138-kV Transmission Line; (9) Halawa-Pukele-Kamoku 138-kV Transmission Lines; (10) Honolulu City Line; (11) Honolulu City Line, Phase 3; (12) Kamoku-Pukele 138-kV Transmission Line; (13) Pukele-Kamoku 138-kV Transmission Line; (14) Pukele-Kamoku 138-kV Transmission Line No. 1; (15) Pukele-McCully (Kamoku) 138-kV Transmission Line; (16) Ring of Reliability; (17) 138-kV Transmission Line at Waahila Ridge

[2]CDUA OA-4/2/75-657 Pukele Kamoku (1975-81); CDUA OA 2793 Pukele Kamoku (1992); CDUA OA 2801 Pukele Kamoku (1992-2002)

[3]Draft Environmental Impact Statement (1979); copyrighted Draft Environmental Impact Statement (1998); un-copyrighted Draft Environmental Impact Statement (1998); Revised Draft Environmental Impact Statement (1999)

petition of 3578 Palolo Valley residents and homeowners who are opposed to Hawaiian Electric Company's plans to place two 138 KV electric transmission lines in Palolo Valley." Twenty years later, the opposition to HECO's proposed Wa`ahila Ridge proposal included the Republican Party and the Green Party[4]. In 2003, the majority of members of HECO's EOTP Community Advisory Group favored no need. The business community said if the PUC determines need, then go with the cheapest alternative. No member supported the proposed 46-kV Expanded Option currently favored by HECO.

D) Applicant Hawaiian Electric Company, Inc.'s ("HECO") filed a Conservation District Use Application ("CDUA"), dated November 16,1995 with the Department of Land and Natural Resources ("DLNR"). The Board of Land and Natural Resources ("BLNR") granted intervention to three parties, Malama O Manoa ("Malama"), The Outdoor Circle ("TOC"), and Life of the Land ("LOL"). The contested case hearing was held on November 1, 2, 5, 6, 7, 8 and 9, 2001. Hearing Officer, Retired Judge E. John McConnell, issued his Proposed Findings of Fact, Conclusions of Law, Decision and Order in early 2002[5] (*most of which were adopted by the BLNR*). For this instant docket, the applicable Proposed Findings of Facts in McConnell's Report are:

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[4]Those who opposed the Wa`ahila Ridge project included the Honolulu Chapter of the American Institute of Architects, First Insurance Company, Hawai`i Republican Party, The Garden Club, Historic Hawai`i Foundation, Hawai`i's Thousand Friends, `Ilio`ulaokalani Youth Coalition, `Ilio`ulaokalani Coalition, Protect Kohanaiki `Ohana, Life of the Land, League of Women Voters, Malama o Manoa, The Outdoor Circle, `Oahu Nature Tours, People for the Environment and Community Health, UH Manoa, Associated Students of the University of Hawai`i, University of Hawai`i Faculty Senate, St. Louis Community Heights Association, Union of Concerned Scientists, National Trust for Historic Preservation, and Natural Resources Defense Fund.
Many government officials have also come out in opposition to this bad idea: Councilmember Duke Bainum, Rep. Ed Case, Mayor Jeremy Harris, Rep. Galen Fox, Sen. Les Ihara, Jr., Rep. Scott Saiki, Sen. Carol Fukunaga, Rep. Sylvia Luke, Sen. Brian Taniguchi, Rep. Brian Schatz, and Rep. Mina Morita.

[5]McConnell's Report used the following notation: (1) "written testimony of the various witnesses will be referred to by the last name of the witness, followed by 'WDT' for written direct testimony ('WST' for written surrebuttal testimony, as may be appropriate), followed by the page and line number of the testimony"; and "Oral testimony of the various witnesses will be referred to by the last name of the witness, followed by 'Tr.' for transcript, the date of the testimony and whether the testimony was given in the 'a.m.' or 'p.m.' if the transcripts are separated by volumes between morning and afternoon testimony, followed by the page and line number of the testimony."

26. In the early 1970's, HECO anticipated that projected increased demand in the Pukele service area would cause the Pukele Substation to be overloaded by the late 1970's and began planning the Kamoku Substation to provide load relief. HECO's intention was to divide the Pukele service area into two parts and construct the Kamoku Substation to serve an area roughly bounded by the Pacific Ocean on the south, University Avenue on the East, Lowery Avenue in Manoa on the north, and Piikoi Street on the west. HECO purchased the site for the Kamoku Substation in 1974. (**Ex. M-30 (1979 EIS), pp. 4, ii, 6.**)

27. In 1979, an EIS was prepared which examined the justification for the project and the impacts of alternative routes for 138 kV transmission lines to energize the Kamoku Substation. (**See Ex. M-30 (1979 EIS), p. 1.**)

28. The 1979 EIS recognized that "there are economical and technical limits to increasing the reliability of the overall power supply system. These limits are in part accommodated by the provision of standby generating facilities at critical facilities such as hospitals and sewage pump stations." (**Ex. M-30 (1979 EIS), p.16.**)

. . . .

33. HECO apparently abandoned or deferred its plans to shift some of the Pukele load to the Kamoku Substation, which is not yet operational. (**Wong, Tr. 11/01/01, p. 142, lines 20-21.**) Nonetheless, there is no evidence that outages caused by the overloading of the Pukele Substation have occurred, as was predicted in the 1979 EIS "no action" alternative.

B. The 1986 Pukele 138 kV Source Reliability Study

34. In 1986, HECO conducted a study to address one of the concerns it now raises: the potential for the Pukele Substation to go down when one of its 138 kV lines is removed from service for maintenance. (**Ex. M-32 (Pukele 138 kV Source Reliability Improvement Study dated September 1986 ("1986 study"**), p. 1..) At the time of the study, the Pukele Substation served approximately 25% of the total system load; HECO was concerned that if the Pukele Substation was out of service, a large portion of the total system load could be affected. The 1986 study evaluated alternate plans to reduce the possibility of losing the Pukele load when one line is removed from service for maintenance. (**Id., p.3.**)

35. Based on the 1981 through 1985 outage history of the lines, the 1986 study concluded that the Halawa-Koolau-Pukele line was "quite reliable," and that the majority of outages on the Waiau-Koolau-Pukele line occurred on the source side of the Koolau Substation, i.e., between the Waiau Substation and the Koolau Substation. (**Ex. M-32 (1986 study), p. 3.**)

36. The 1986 study evaluated three alternatives to improve the reliability of the 138 kV source to Pukele. Two alternatives involved bringing a third line to the Pukele Substation, as is now being proposed by HECO, but either from the School Street Substation, at a cost of $16-$30 million, or from the Halawa Substation, at a cost of $20.4 million. (**Ex. M-32 (1986 study), p. 4.**) The third alternative, and the one that was recommended, was to convert the Koolau Substation to what is called "a breaker-and-a-half' scheme, which would sectionalize the Halawa-Koolau- Pukele and Waiau-Koolau-Pukele lines. The cost of this alternative was estimated at $2.7 million. (**Id., p. 3.**)

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afternoon testimony, followed by the page and line number of the testimony."

37. Converting the Koolau Substation to a breaker-and-a-half scheme would eliminate the three-terminal lines. Three-terminal lines are not standard industry practice because a fault on the line could cause loss of power to multiple substations. Three-terminal lines are undesirable, and HECO's consultants have stated that they should be avoided at all costs and not used even temporarily. **(Wong, Tr . 11/01/01, p. 163, line 22- p.164, line 13; Shirai, Tr. 11/06/01 p.m., p. 1031, line 25 -p. 1032, line 10; Ex. M-35, p. X-14.)**

38. HECO concluded that converting the Koolau Substation to a breaker-and-a-half scheme would improve the reliability of the 138 kV source to Pukele Substation, and that the lines would be less prone to outages once the sectionalizing breakers were installed since the majority of the faults on the lines to Pukele were on the source side of the Koolau substation. Not only would the conversion considerably reduce the probability of losing the entire Pukele load when one line was out for maintenance, but the time required to locate a fault would also be substantially reduced. HECO concluded that this should reduce the time required to restore the line, and reduce the anxiety caused by having only one line to Pukele in service when maintenance is being done on the other. **(Ex. M-32 (1986 study), p.3, 5.)**

39. Despite the 1986 study's recommendation to convert the Koolau Substation to a breaker-and-a-half scheme, HECO did not immediately implement the recommendation. **(Wong, Tr. 11/01/01, p. 90, lines 3-5.)**

C. The 1987 (Super Bowl) and 1988 Pukele Outages

40. HECO cites a 1987 outage in the Pukele service area as part of its justification for the Kamoku-Pukele line. **(See, e.g., Revised Final EIS, pp. 2-5, 2- 11,3-62.)**

41. The 1987 outage occurred on Super Bowl Sunday in January 1987, when HECO was performing scheduled maintenance work on a bus at the Pukele Substation and a fault on one of the source lines caused an outage. **(Wong , Tr. 11/01/01, p. 91, lines 8-15; Shirai, Tr. 11/06/01 p.m., p. 1048, lines 18-21.)** Although Ken Morikami, HECO's Director of Project Management, testified at the March 22, 2001 public hearing that the entire Pukele service area was blacked out when one of the lines to Pukele was out of service for maintenance and the other was suddenly lost **(Morikami, Tr. 03/22/01, p. 28, lines 15-25)**, that testimony was incorrect. **(Wong, Tr. 11/01/01, p. 91, line 21- p. 92, line 12.)** Rather, only 30% of the Pukele service area was affected for between 15 and 45 minutes. **(Wong, Tr . 11/01/01, p. 91, lines 8-15; Shirai, Tr. 11/06/01 p.m., p. 1024, lines 12-15.)**

42. Had HECO promptly acted on the recommendation in its 1986 study to improve the reliability of the Pukele source by converting the Koolau Substation to a breaker-and-a-half scheme, the outage would not have happened since a fault on the source side of Koolau Substation, as occurred, would not have caused an outage at the Pukele Substation. **(Shirai, Tr. 11/06/01 p.m., p. 1048, line 22- p. 1049, line 21.)**

43. The single instance in the thirty-five years since the Pukele Substation was energized in which one of the lines to Pukele was suddenly lost while the other was out of service for maintenance occurred in 1988. **(Wong, Tr. 11/01/01, p. 90, line 24- p. 91, line 11 and p. 92, lines 13-18.)** However, either no customers lost power because the outage lasted for only a fraction of a second or, at worst, customers lost power for a second or two. **(Wong, Tr. 11/01/01, p. 91, lines 4-7 and p. 92, lines 13-18; Shirai, Tr. 11/06/01 p.m., p. 1023, lines 8-20.)** Notwithstanding the above, Mr. Shirai testified that the 1987 and 1988 outages were "certainly an adequate reason for acting responsibly and

practicably to address this problem of having only two transmission lines to Pukele substation." (**Shirai, Tr. 11/06/01 p.m., p. 1003, line 2**) Had HECO acted "responsibly and practicably" to implement its own recommendations to convert the Koolau substation to a breaker-and-a half system, the 1987 Super Bowl outage would not have occurred.

D. Island Wide Outages, Investigations and Recommendations

44. On July 13, 1983, HECO experienced an island-wide blackout. This precipitated a request by the Governor of Hawaii and the Mayor of Honolulu to the Public Utilities Commission ("PUC") to order a comprehensive investigation of the blackout and a diagnostic review of the many factors affecting HECO's system reliability. (**Revised Final EIS, p. 2-5; Ex. M-31 (Stone & Webster Management Consultants, Inc. Investigation of July 1983 Blackout dated February 1984 ("Stone & Webster report")), p. 1.**)

45. Stone & Webster Management Consultants, Inc. ("Stone & Webster") was selected to conduct the investigation. It issued its report in February 1984, identifying areas for improvement and recommending steps that should be taken to minimize the possibility of reoccurrence, recognizing that "development of a power system that is totally free of interruptions cannot be guaranteed." (**Ex. M-31 (Stone & Webster report), p. 1.**)

46. Stone & Webster concluded that the cause of the blackout was a combination of unusual events, including that two major 138 kV lines were out of service for repairs and there was a three-phase fault on a third 138 kV line caused by a cane fire in west Oahu. (**Ex. M-31 (Stone & Webster report), p. 4**)

47. Stone & Webster made twelve principle recommendations, one of which was that at least two transmission line crews should be trained in "hot-stick" maintenance of 138 kV transmission lines to eliminate the necessity to take lines out of service for some maintenance procedures such as changing insulators. (**Ex. M-31 (Stone & Webster report), pp. 9,144,81.**)

48. Stone & Webster also recommended, as one of their twelve principle recommendations, was that "[a] second power corridor from Kahe to Makalapa and extended to the Pukele area via the leeward side of the Island is highly desirable to reduce the probability of a blackout, including during storms." (**Ex. M-31 (Stone & Webster report), p. 9.**)

49. At the time of Stone & Webster's investigation in 1983, electricity generated in western Oahu was transmitted to the central and eastern Oahu over a single transmission corridor. (**Wong, WDT, p. 2, lines 36-39; Ex. M-31, p. 3, 122**) HECO started building the southern corridor in 1985 (**Wong, WDT, p. 2, line 43- p. 3, line 1**) and, with the completion of the Archer-Kewalo and Kewalo-Kamoku 138 kV lines, the southern transmission corridor extends into the Pukele area via the leeward side of the Island, as Stone & Webster recommended. As Mr. Shirai testified, the southern corridor is now complete. (**Shirai, Tr. 11/06/01 p.m., p. 1040, lines 23- 24.**)

50. Following another island wide blackout on April 9, 1991, which left customers without power for 7 to 12 hours, the PUC ordered another investigation into, among other things, the cause of the outage and the measures recommended to increase reliability and eliminate or mitigate a recurrence of the outage. The investigation was conducted by Power Technologies, Inc. ("PTI"). (**Revised Final EIS, p. 2-5; Ex. M-35 (Investigation of 1991 Oahu Island-Wide Outage dated August 26,1993 ("PTI report")), p. 1; Ex. M-44** In re Investigation of Hawaiian Electric Company Inc. Regarding Recent Major Outage,

PUC Docket No.6281, Decision and Order No.17099 filed July 30, 1999 ("PUC D&O No.17099")), pp. 1-3.)

51. As part of its investigation, PTI examined the extent to which HECO had implemented the recommendations of the Stone & Webster report (**Ex. M- 35 (PTI report), p. 1 and Appendix VIII, pp. VI11-1 -VIII-22**). Of the 147 recommendations PTI identified in the Stone & Webster report, PTI found that the vast majority had been implemented, and HECO found alternative solutions to most of the recommendations that HECO found too costly to implement. (**Ex. M-35 (PTI report), p. 3.**) However, PTI also found that "only those [Stone & Webster recommendations] associated with right-of-way clearing, line patrolling and maintenance, and live-line work were not fully implemented; unfortunately, these are also the only Stone and Webster recommendations that were a direct contributing factor in the April 1991 blackout." (**Id.**)

52. Specifically, PTI found that HECO's failure to effectively and fully implement live-line work techniques was a "key item. ..associated with the immediate cause of the April 1991 outage," and was an issue that "continue[d] to require proactive management response at all levels, and by every department of HECO." (**Ex. M-35 (PTI report), p. 3.**)

53. Of the 109 specific recommendations made in the PTI report, one of the four recommendations identified as deserving immediate attention was to increase the number of authorized linemen personnel in the live-line section from fifteen to twenty and initiate live-line work activities that will permit the replacement of complete structures while energized as soon as possible. (**Ex. M-35 (PTI report), p. vii; Ex. M-44 (PUC D&O No.17099), p. 9.**)

E. 1991 and 1992 East Oahu 138 kV Requirements Studies

54. In a July 1991 study, updated in August 1992, HECO evaluated various alternatives to meet the projected load growth in East Oahu and concluded that installing a 138 kV line from Archer Substation to Pukele Substation via Kewalo and Kamoku Substations was the best solution to serve the increased loads projected in the East Oahu area. (**Ex. M-34 (East Oahu 138 kV Requirements Updated, dated August 1992 ("1991/92 requirements studies")), p. 1.**)

55. The 1991/92 requirements studies were based on several assumptions, including that the demand would increase as projected by the November 8, 1991 peak forecast, and that the Honolulu Power Plant would be retired at the end of 1994. (Ex. M-34, pp. 5,7.) Those assumptions proved to be erroneous. For example, the November 8, 1991 forecast projected peak loads of 1,167 MW in 1991 and 1,435 MW in 1999 (**Ex. M-34, Appendix F**); the actual peak load in 1999 was even less than the projection for 1991 --only 1,161 MW. (**Ex. M-81 (Figure 2-9 from Revised Final EIS).**) The retirement of the Honolulu Power Plant has been deferred to beyond 2017. (**Ex. M-37, p. 5.**)

56. The 1991/1992 requirements studies predicted that, "[i]n 1994, if one line feeding the Koolau Pukele area is out for maintenance, and another fails, the remaining line will become overloaded." (**M-34, p. 3.**) There is no evidence that that has occurred.

F. 1991 Pukele 138 kV Source Reliability Improvement Study Update

57. In October 1991, having failed to adopt the recommendation of its 1986 study, HECO again evaluated alternate plans to address its concern that, if one of the 138 kV source lines to Pukele was out of service for maintenance and the remaining line failed, the

entire Pukele Substation would be out of service. (**Ex. M-33 (Pukele 138 kV Source Reliability Improvement Study, Revised October 24,1991 ("1991 update")), p. 1,2.**)

58. The 1991 update again reviewed the outage history for the Waiau-Koolau-Pukele and Halawa-Koolau-Pukele lines, and again concluded that the majority of forced outages on both lines occurred on the source side of the Koolau Substation. (**Ex. M-33 (1991 update), p. 5.**)

59. HECO also reexamined the same alternatives originally evaluated in the 1986 study and again rejected adding a third line to Pukele, instead renewing its 1986 recommendation that the Koolau Substation be converted to a breaker-and-a-half scheme. The 1991 update concluded that "[a]lthough installing a third line to Pukele will provide more security for Pukele, the substantially lower cost of modifying the Koolau 138 kV bus must be considered. It is System Planning's judgment that the incremental improvement in reliability gained from a third line does not justify the substantial additional cost." (**Ex. M-33 (1991 update), p. 9.**)

60. The conclusion of the 1991 update, that the cost of a third line was not warranted by the incremental reliability improvement over the lower cost recommendation, was consistent with the conclusions in the 1990 report of the HECO Utilities' Reliability Task Force that "there are alternatives or measures that can be taken to mitigate the probability, extent and duration of outages. However, the underlying factor is that there are costs associated with each of these alternatives. ... The utilities must therefore balance these costs against the potential improvement in reliability." (**Ex. M.:.90 ("Methodology for Determining Reliability Indices for HECO Utilities" dated December 1990), p. 18.**)

61. The 1991 update reaffirmed HECO's earlier conclusion that converting the Koolau Substation to a breaker-and-a-half scheme would considerably reduce the probability of losing the Pukele load when one line is out for maintenance, and substantially reduce the time required to locate a fault. "It will also reduce the anxiety caused by having only one line to Pukele in service when maintenance is being done on the other because of the reduced exposure of anyone segment of the line. " (**Ex. M-33, pp. 9-10.**)

62. By the time of the PTI report in 1993, the Koolau Substation had not yet been converted to a breaker-and-a-half scheme and the lines were the last three-terminal circuits on HECO's system. PTI recommended that the Koolau conversion, which at that time was scheduled for 1993, be completed as soon as possible because "[t]hree-terminal circuits should not be used even temporarily." (**Ex. M-35 (PTI report), p. X-14.**) The modification finally was completed in 1994 or 1995. (**Wong, Tr. 11/01/01, p. 90, lines 3-5.**)

. . . .

75. HECO claims that the Kamoku-Pukele line will benefit the public by preventing two types of major power outages: first, power outages caused by the unexpected loss of one of the two 138 kV lines to the Pukele Substation when the other line is out of service for maintenance ("Pukele reliability issue"); and, second, the overloading of the third 138 kV line to the Koolau Substation when one line is out of service for maintenance, a second is lost for any reason, and both of these events occur when the load exceeds the capacity of the third line, causing it to overload and shut down. This would result in an outage to both the Koolau and Pukele service areas ("Koolau overloading problem"). (**Wong, Tr. 11/01/01, p. 50, line 19 - p. 52, line 10; p. 81, line 14- p. 82, line 5 p. 105, lines 13-23.**)

76. Leaving aside for the moment the issue of alternatives, there can be little question that the construction of a geographically independent 138 kV line to Pukele which connects the northern and southern transmission corridors, viewed alone, will increase reliability of the system to some degree. The Board cannot however, discharge its duty to protect conservation land by relying on this single consideration. It must assess the benefit and weigh it against the project's adverse impacts. HECO in essence urges that its responsibility is to "keep the lights on" no matter what, ignoring the fact that no system is 100% reliable, that it has waited decades to address this problem, that it has refused to calculate the probability of an outage (which in fact has decreased since earlier studies), and that no outages have occurred under the system's current configuration. For these reasons the claimed benefits of the project are speculative and substantially overstated. Given that the useful life of the line is thirty-five years (**Shirai, 11/07/01 a.m., p. 1092, lines 8-24**), it may well be the case that no outages at all will be prevented. **(Wong, Tr. 11/01/01, p. 90, lines 20-23; Shirai, Tr. 11/06/01 p.m., p. 1013, lines 11-13.) (Shirai, Tr. 11/06/01 p.m., p. 1013, lines 11-13; Tr. 11/07/01 a.m., p. 1148, line 16- p. 1149, line 23.**)

A. HECO's Planning Criteria do not Require the Proposed Line

77. The statistical frequency and probability of multiple transmission line outages, as would be required to cause the blackouts HECO seeks to prevent by building this line, can be determined by a mathematical formula based on the outage history of each line. **(Ex. M-35 (PTI report), p.I11-15.**)

78. HECO has not determined the probabilities of such double and triple contingencies occurring, explaining:

> HECO did not assess the statistical or probabilistic number of outages that may be prevented by the construction of the proposed Kamoku-Pukele 138 kV Transmission Line in its determination of the need for the project. Such an approach required the use of probabilistic transmission planning. HECO's transmission planning methods are deterministic. To HECO's knowledge, no major utility has replaced deterministic transmission planning methodologies with probabilistic transmission planning methodologies. Thus, the need for the Kamoku-Pukele line was assessed using the HECO Transmission Planning Criteria (as outlined in Appendix C2) and methods that are consistent with the prevailing standards of the utility industry.

(Revised Final EIS, pp. 2-3- 2-4; see also, Shirai, Tr. 11/06/01 p.m., p. 1013, lines 11-23.)

79. HECO believes that the impact of an outage of the Pukele service area would be so great that it essentially does not matter to HECO what the probability of such an outage is. **(Shirai, Tr. 11/06/01 p.m., p. 1016, lines 5-9; Tr. 11/07/01 a.m., p. 1149, lines 9-23.)**

80. Nothing in HECO's planning criteria precludes it from calculating the probability of an outage at the Pukele Substation and it would not have to change its planning methodologies to do so. **(Ex. M-37, Appendix B (HECO Transmission System Planning Criteria dated January 28,1997 ("HECO planning criteria ".))**

81. Moreover, HECO's planning criteria do not require the addition of a third transmission line to Pukele since those planning criteria do not require that all loads be able to be maintained in the event of a double contingency transmission line outage. HECO's planning criteria "establish guidelines for planning a reliable transmission system for the island of Oahu," and define the 7 conditions for which the system is planned, including:

> (3) With any generating unit off for overhaul, and any transmission line out of service for maintenance, no transmission system component will exceed its EMERGENCY rating, nor will voltage levels violate their upper or lower limits for any of the following outages: a. Any other generating unit. b. Any other transmission circuit. c. Any multiple transmission circuit outage caused by a line down at a crossing point. d. Any transmission transformer. e. Any transmission bus. NOTE: The purpose of criterion 3 is to help assure that the system will survive. All loads may not continue to be served, but those that do will not cause any transmission system component to exceed its EMERGENCY rating[.]

(**Ex. M-37, Appendix B (HECO planning criteria), § I, p. 1; § IV.3., pp. 3-4.**) Thus, HECO's planning criteria expressly do not require that all loads will continue to be served when one transmission line is out of service for maintenance and there is an outage of another transmission circuit.

B. The Proposed Line is Less Justified Now Than it Was in 1986

82. Although the Pukele Substation was constructed with only two 138 kV source lines and has operated that way for more than thirty-five years (**Wong, Tr. 11/01/01, p. 84, lines 15-22**), and notwithstanding that HECO believed in 1979 that the Pukele system was "reasonably reliable" because it had a backup 138 kV line (**Ex. M-30, p. 17**), HECO now believes that "to contend that two transmission lines are adequate for the importance of this service area is irresponsible and shows a lack of understanding and concern over the impact of a major outage to critical customers and communities." (**Shirai, Tr. 11/06/01 p.m., p. 1002, lines 21-25.**)

1. Improvements made to the Koolau Substation

83. Both the probability of an outage at Pukele, as well as the impacts of such an outage, appear to have decreased significantly since HECO began planning this line, which, according to Mr. Shirai, was fifteen years ago. (**Shirai, Tr . 11/06/01 p.m., p. 1040, line 23- p. 1041, line 1.**) The conversion of the Koolau Substation to a breaker-and-a-half scheme in 1994 or 1995 considerably reduced the probability of losing power to the Pukele Substation when one line is out of service for maintenance and, had it been done earlier, would have prevented the only blackout HECO contends could have been prevented by a third line to Pukele. (**Wong, Tr. 11/01/01, p. 90, lines 6-10; Shirai, Tr. 11/06/01 p.m., p. 1049, lines 18-21; Revised Final EIS, pp. 2-5,2-11,3-62.**)

84. The statement in the Revised Final EIS, that "the no action alternative would directly allow the repeat of outages, such as occurred on Super Bowl Sunday in 1987" (**Revised Final EIS, p. 3-62**), is misleading. If the same circumstances that caused the outage in 1987 were to occur now, there would be no outage.

85. HECO appears to contend that the 1987 outage of 30% of the Pukele service area for 15-45 minutes and the momentary outage in 1988 are sufficient reason to build the Kamoku-Pukele Line (**Shirai, Tr. 11/06/01 p.m., p. 1003, line 22 - p. 1004, line 2**).

Fifteen years ago, however, when the Pukele load was at it highest levels (**id., p. 1038, lines 14-25**), HECO did not consider the 1987 outage a sufficient reason to correct a condition it knew was substandard and undesirable, even though the cost would have been less than $3 million, because it had more important priorities. (**Id., p. 1049, line 18- p. 1050, line 12.**)

86. Since the Koolau Substation was modified and the lines were sectionalized in 1994 or 1995, there have been no power outages in the Pukele service area caused by losing a transmission line while the other was out of service for maintenance. (**Wong, Tr. 11/01/01, p. 96, lines 2-22; Shirai, Tr. 11/06/01 p.m., p. 1026, lines 15-17.**)

2. Improvements in the Vegetative Management Program

87. HECO has made other improvements in the past fifteen years which would be expected to further reduce the probability of faults on the source lines to the Koolau and Pukele Substations. For example, Stone & Webster, finding that HECO's tree-trimming practices were "inadequate" and "could be improved," made a number of recommendations regarding vegetative management. (**Ex. M-31 (Stone & Webster report), pp. 77,78-79.**) In 1993, PTI found that, along with failure to implement live-Line maintenance, HECO's failure to implement Stone & Webster's recommendations regarding vegetative management and tree-trimming was a direct contributing factor of the April 1991 blackout. (**Ex. M-35 (PTI report), p. 3.**) Of the many recommendations PTI made, four were identified as requiring immediate attention, including:

> Perform a detailed inspection of all spans in the 138 kV system to establish present clearance distances to trees, wire crossings and other conductive objects is sufficient for at least one year.
>
> Develop the relationships between circuit normal and emergency loadings and conductor sag changes (for each conductor size used on the 138 kV transmission system) and incorporate the data into the process of assigning tree-to-conductor distances through a joint effort of Operations and Engineering.

(**Ex. M-35 (PTI report), p. vi.**)

88. HECO reported to the PUC that, as of May 11, 1999, it had completed these priority recommendations. (**Ex. M-44 (PUC D&O 17099), p. 9.**) HECO also implemented PTI's recommendations regarding vegetation management, including revising its tree-trimming policy and, as of May 11, 1999, reportedly had implemented 81% of PTI's recommendations. (**Id., pp. 10,4.**)

89. The only two outages of the Pukele service area caused by failure of a transmission line while the other line or some other component was out of service for maintenance were both directly caused by trees contacting transmission lines. (**Shirai, Tr. 11/06/01 p.m., p. 1048, line 22- p. 1049, line 4; p. 1023, lines 4- 15.**) Now that HECO has improved its tree-trimming policy and vegetation management plan, the possibility of tree contact with the transmission lines should be reduced.

90. If HECO has incorporated the relationships between normal and emergency circuit loadings and sag changes into its process of assigning tree-to-conductor distances, as it reported to the PUC that it had (**Ex. M-44 (PUC D&O 17099), p. 9**), then Mr. Shirai' s testimony that the source lines to the Koolau Substation could sag enough to allow tree

contact at loads less than the emergency loadings of those lines (**Shirai, 11/06/01 p.m., p. 1066, lines 7-23**) is incorrect.

91. Stone & Webster and PTI also made numerous recommendations, most of which HECO has reportedly implemented, regarding improved inspection and maintenance procedures to minimize the risk of outages. (**See Ex. M-31 (Stone & Webster report), pp, 77-80; Ex. M-35 (PTI report), § IV .**)

3. The load in the Pukele service area has decreased

92. The potential impacts of an outage of the Pukele service area, in terms of the size of the load that would be lost, appear to have decreased. Fifteen years ago, the Pukele peak load constituted approximately 25% of the Oahu peak load. (Ex. M-32, p. 1.) The system peak load in 1986 was 986 MW (**Ex. M-81**), so the Pukele peak load was approximately 246.5 MW. By 2000, the Pukele peak load had decreased to approximately 200 MW and, as a proportion of the Oahu peak load, declined to approximately 17%. (**Revised Final EIS, p. 3-52; Wong, Tr. 11/01/01, p. 85, line 20 -p. 86, line 1.**)

93. Stone & Webster recommended in 1984 that HECO investigate remedial improvements to allow for restoration of a significant amount of the load in the event power was lost to the Pukele Substation due to the simultaneous outage of both transmission lines. (**Ex. M-31 (Stone & Webster report), p. 85.**) According to the 1993 PTI report, HECO implemented that recommendation by adopting a switching scheme to move 20% of the load to other substations. (**Ex. M-35 (PTI report), p. VIII-13; see also, Shirai, Tr. 11/06/01 p.m., p. 1028, line 16- p. 1030, line 20.**) There is also back-up generation of 39MW to 52 MW available in the Pukele service area. (**Revised Final EIS, p. 3-61.**)

94. Moreover, when the Kamoku Substation becomes operational in 2002 (**Wong, Tr. 11/01/01, p. 142, lines 18-21**), the commercial customers in Waikiki, which are the customers for whom HECO believes a power outage would be unacceptable (**Shirai, Tr. 11/06/01 p.m., p. 1055, lines 8-19; Tr. 11/07/01 a.m., p. 1153, line 2- p. 1154, line 3**), will have another source of power over an alternate route, since the purpose of the Archer-Kewalo and Kewalo-Kamoku 138 kV lines is to serve customer load in the Kakaako, Ala Moana and Waikiki areas. (**Revised Final EIS, p. ES-5.**)

C. HECO's System is Reliable

95. The reliability of HECO's system compares favorably with mainland utilities. HECO reported to the PUC that its average service reliability for 2000 (which measures both duration and frequency of outages) was the third best in 22 years, at 99.98%. HECO's web site announces that HECO is in the top 15% of U.S. utilities with the shortest duration of outages. (**Wong, Tr. 11/01/01, p. 98, line 23- p. 99, line 5; Shirai, Tr.11/06/01 p.m., p.1016, line 15- p. 1017, line 11.**)

96. HECO measures reliability across the whole system, not just transmission or distribution reliability, and does not break down the reliability data by specific geographical area, although it has the capability to examine outages by service area. Although it has not examined the reliability data with respect to the Pukele service area specifically, HECO has no reason to believe that customers in the Pukele service area experience more frequent outages, or outages of longer duration, than HECO's other customers. (**Revised Final EIS, p. 2-4; Shirai, Tr. 11/06/01 p.m., p. 1022, line 16- p. 1023, line 3; Tr. 11/07/01 a.m., p. 1115, lines 16-23.**)

D. PUC Decision and Order No.18627

97. Mr. Luersen testified that " [p]roviding a new transmission line to connect Pukele and Kamoku Substations would improve reliability consistent with the findings of government agencies as well as HECO's standards related to transmission reliability ." (**Luersen, WDT, p. 3, lines 38-40.**) With respect to "HECO's standards," Mr. Luersen admitted that he was only superficially familiar with HECO's planning criteria, which is what he was referring to as HECO's standards related to transmission reliability, and has no personal knowledge that the line would improve reliability consistent with HECO's standards relating to transmission reliability. (**Luersen, Tr.11/02/01, p. 236, line 24- p. 237, line 21.**)

98. Regarding his reference to findings of governmental agencies, Mr. Luersen was relying on the PUC's Decision and Order No.12627 in In re the Matter of the Application of Hawaiian Electric Company, Inc. for Approval to Commit Funds in Excess of $500,000 for Item BT-476 Installation of Kewalo-Kamoku 138 kV Transmission Line, PUC Docket No.7602 ("PUC D&O No.12627"). In that Decision and Order rendered in 1994 the PUC commented in approving the Kewalo- Kamoku 138 kV line that " ..., the new circuit will also provide a third feed to the Pukele Substation, the most heavily loaded 138 kV substation in the HECO system. This will improve system reliability and will ultimately benefit rate payers." That decision however was concerned with the Kewalo-Kamoku line not the Kamoku-Pukele line. It does not address the use of conservation lands and in any event would not control any future PUC order concerning the Kamoku-Pukele line. (**Luersen, Tr. 11/02/01, p. 232, line 22- p. 235, line 16; see Ex. H-44 (PUC D&O No.12627), p. 4.**)

99. HECO has not yet sought the PUC's approval for the project and has elected not to do so until after a decision has been made on its CDUA which is the subject of this proceeding. (**Wong, Tr. 03/22/01, p. 45, line 16- p. 46, line 14.**)

. . . .

F. The State Adjutant General's October 19, 2001 Letter

105. On October 19, 2001 State Adjutant General and Director of Civil Defense at the prompting of a legislator wrote a cursory letter in support of the project. That letter, however, contains no facts nor analysis supporting the inference that this project is essential to the effective functioning of the "critical facilities" listed in HECO's proposed findings of fact No.175. Such an inference is unsupported by the evidence.

. . . .

IX. PRACTICABLE ALTERNATIVES EXIST

. . . .

B. Live Line Maintenance Would Substantially Satisfy the Purported Need for the Proposed Line

271. Under either the "Pukele reliability" or "Koolau overloading" scenarios, the potential outages HECO seeks to prevent can occur only when a 138 kV line is out of service for maintenance. (**Wong, Tr. 11/01/01, p. 112, lines 1-11.**)

272. Thus, reducing the amount of time that the 138 kV lines are out of service for maintenance would reduce the probability of the blackouts that the line is intended to prevent (**Wong, Tr. 11/01/01, p. 114, lines 12-19**); however, HECO has still not fully implemented the recommendations of the consultants who investigated the Island-wide blackouts that it adopt live-line maintenance procedures.

273. The Stone & Webster report recommended in 1984 that HECO adopt live-line maintenance procedures so that some maintenance could be conducted on the 138 kV lines without having to remove the lines from service. (**Ex. M-31 (Stone & Webster report), pp. 9, 81, 144.**)

274. Almost ten years later, PTI, in its 1993 report of its investigation of the 1991 Island-wide outage, found that HECO's failure to effectively implement live-line maintenance was a direct contributing factor in the 1991 blackout. (**Ex. M-35 (PTI report), p. 3.**) The PTI report stated that the fact that HECO has not updated itself in transmission maintenance and operational practices, particularly in the areas of vegetation and live-line management, "has unnecessarily prolonged transmission line outages and has increased the exposure of the 138 kV system to risk." It went on:

> [T]here should be a concerted effort aimed at minimizing the number of hours each year that 138 kV transmission circuit or lines are removed from service for any work or maintenance activity. ...[138 kV] is HECO's backbone system; backbone transmission circuits and lines should not be "routinely" taken out of service for maintenance.
>
> HECO must seriously consider safe, proven, line maintenance practices other than de-energizing (e.g., live-line work, or the more common term used to work on facilities when energized: "live working"). It would appear that HECO has remained wedded to line work practices that do not give ample consideration to economics and contingency analysis. ...HECO should take advantage of live working practices which have been proven and implemented by utilities on the mainland and around the world[.]

(**Ex. M-35 (PTI report), p. IV-l**).

> The PTI report continued: [B]y increasing the level of training at HECO to the advanced stage, experience has demonstrated in like situations at other utilities (e.g., Virginia Power, Public Service and Gas, Philadelphia Electric) that most work, including entire structure replacement, can be safely performed with little or no increase in dollar cost using the procedures. The number of required interruptions (outages) to circuits/lines were then found to be about 1/3 or less of those before the active implementation of a live-line work enhancement program.

(**Ex. M-35 (PTI report), p. IX-4.**)

275. HECO apparently justified its failure to adopt live-line maintenance on advice it had received that major modifications had to be done to HECO's transmission structures in order to accommodate live-line maintenance. (**See Ex. M-35 (PTI report), p. IX-3.**)

276. PTI, however, pointed out that "overall structural loads during live-line work do not compare with those found during a high wind-loading condition" (**Ex. M-35 (PTI report),**

p. IX-13), and reported that "[w]ith a review by engineering of the loads imparted, along with the discussion of different methods available to handle insulator changes using live-line work practices with experienced live-line work technical people, this 'concern' [about the ability of HECO's structures to handle the loads imparted by live-line work] should be eliminated." (Id, p. IX-3.)

277. PTI further determined that modification of HECO's techniques, as opposed to modification of the structures, would allow live-line maintenance work, and gave as an example a field evaluation technique that "would probably greatly reduce the number of lattice structures, if any, that will require a retrofit before hot line work can be accomplished." (**Ex. M-35 (PTI report), p, IX-6**).

278. HECO has made little demonstrable progress in implementing live-line maintenance procedures and now appears poised to abandon the concept altogether. Although it reported to the PUC in 1999 that it had hired three additional field personnel for its live-line section, and thus had moved 60% of the way to PTI's priority recommendation to increase the live-line section from 15 to 20 personnel, HECO also stated that unspecified changes in its practices and technological advances may modify resource requirements and that it may find, following a reevaluation of manning levels, that the completion of the Waiau-CIP lines diminished the need for an increased staffing in the live-line section. (**Ex. M-44 (PUC D&O No. 17099), p. 9.**)

279. Today, there are only seven qualified linemen in the live-line section. HECO believes this is adequate for the current system configuration because, with the completion of the southern corridor, "the need to continue live-line maintenance was substantially reduced." (**Shirai, Tr. 11/06/01 p.m., p. 1010, lines 1-8.**)

280. The live-line section is ultimately under Mr. Shirai's supervision (**Wong, Tr. 11/01/01, p. 160, lines 14-19**), and Mr. Shirai was responsible for overseeing the engineering and design of the upgrades to the Koolau-Pukele transmission structures. However Mr. Shirai does not know whether, when the aluminum towers on the Koolau-Pukele lines were upgraded in 1998, the upgrade was completed to live-line maintenance standards. Mr. Shirai counted on the project manager to have that detail, but does not recall who the project manager was on the structure upgrade project. (**Shirai, Tr. 11/07/01 a.m., p. 1101, line 20- p. 1103, line 8.**)

281. Mr. Wong testified that, whenever routine or emergency maintenance work is done on the Koolau-Pukele lines, the lines have to be taken out of service, which happened more than twenty times last year. (**Wong, Tr. 11/01/01, p. 50, lines 19-25; p. 64, lines 10-16.**) Mr. Wong also testified that he "does not know what the latest is on the live-line maintenance[.]" (Id., **p. 118, lines 6-7.**) Mr. Wong's testimony that live-line maintenance could not be done on the Koolau-Pukele transmission structures (**Wong, Tr. 11/01/01, p. 121, lines 1- 25**) was based on his assumption that the live-line maintenance group looked at the entire transmission system to determine where live-line maintenance could be applied; he is unfamiliar with any such studies and does not know that they were done. (**Wong, Tr. 11/01/01, p. 160, lines 1-13.**)

282. Live-line maintenance could substantially reduce the probability of outages at the Koolau and Pukele Substations by reducing the amount of time the lines are out of service for maintenance. As PTI pointed out, one of the costs of planned maintenance outages is the system-wide cost of requiring multiple lines or circuits so there is backup when lines are de-energized for maintenance. (**Ex. M-35 (PTI report), p. IV-13.**) Thus, an effective live-line maintenance program could substantially eliminate the purported need for the proposed Kamoku-Pukele Line.

E) For this instant docket, the applicable **Proposed** Conclusions of Law in McConnell's Report are. . . .

> 16. HECO asserts that the PUC has exclusive jurisdiction to determine the issue of "need" for the project under HRS §269. However, HECO's contention that therefore the Board lacks jurisdiction to determine "need" does not deprive the Board of its jurisdiction and obligation to assess and weight the project's public benefit against its adverse impacts under the constitutional, statutory, and administrative provisions governing uses in conservation districts cited above. Indeed, the concepts of "public benefit" and "need" are sufficiently similar and intertwined that a simplistic labeling approach is not helpful. Much of the evidence introduced by all parties to this proceeding including HECO goes to the question of the necessity or need for this project. The same evidence also goes directly to the nature and extent of its public benefit.
>
> 17. The public benefit, or public need, for this project has been substantially overstated by HECO and is speculative. Briefly summarized, the evidence establishing such overstatement and speculation is: (a) the fact that in 1986 HECO determined the Pukele reliability issue was not a priority; (b) in percentage terms the load of the Pukele Substation then constituted approximately 25% of the entire system as opposed to approximately 17% today; (c) the Koolau Substation bus has been modified to a breaker-and-a-half system which greatly reduces the probability of an outage at Pukele (the 1987 Super Bowl Sunday Blackout used as justification for this project would not have occurred had this work been done in 1987 and would not occur today if identical circumstances were repeated); (d) HECO again concluded in 1991 that "the incremental improvement in reliability gained from a third line [to Pukele does not justify the substantial additional cost"; (e) also in 1991 HECO again merely recommended the modification of the Koolau bus which is now completed; (f) even in the event of an outage at Pukele 20% of that load can now be switched to other substations; (g) the completion of the southern transmission corridor to the Kamoku Substation will enable that substation to serve loads in Waikiki, particularly commercial customers; (h) HECO has not calculated the probability of either the double contingency outage or triple contingency outage that would be prevented by the project and essentially takes the position that no probability of outage is acceptable; (i) HECO has made improvements to its vegetative management and tree trimming procedures to lessen the risk of trees touching the lines; (j) no outages at Pukele have occurred since the modification at Koolau Substation that resulted from the loss of a transmission line; and (k) HECO's system reliability is 99.98%.
>
> 18. More importantly, even if the public benefit in reliability resulting from the proposed project were not overstated and speculative, practicable alternatives exist which briefly summarized are: ... (b) fully implementing live-line maintenance which has been recommended since 1984 and would greatly reduce the risk of an outage.

F) The project is not needed. If any need exists, there are alternatives which are cheaper and more environmentally friendly.

Editorial: Waahila report tangles HECO's power line The issue: An official says the state should not let HECO install power lines on Waahila Ridge. HECO contended that the project was needed to ensure service to its customers and to prevent massive power failures, a point disputed by the hearings officer, retired Circuit Judge E. John McConnell. McConnell reported that HECO had "substantially overstated" the need for the $31 million project. He cited the company's own previous assessments that the reliability gained from the lines would not justify the costs involved. Moreover, improvements the company has already made in its operations would negate the need for the line, he said, and HECO rates its reliability at 99.98 percent. ... Hawaiian Electric clearly has the responsibility of providing reliable power service to its customers, but it also has an obligation to seek out new methods to generate, store, distribute and manage power. ... Technology and marketplace incentives are accelerating energy production and distribution methods beyond the traditional service that companies like Hawaiian Electric provide. The Waahila Ridge system would require consumers to pay for old technology well after it is installed and gives HECO little incentive to move in other directions. Doing things the way they have always been done will mortgage Hawaii's energy future. **Honolulu Star-Bulletin Tuesday, February 12, 2002** (emphasis added)
http://starbulletin.com/2002/02/12/editorial/editorials.html

Editorial: HECO plans must address need, wants: "It may be that some of the skeptics got to that point in their thinking primarily because they opposed Wa'ahila. They wanted something to argue against the ridgeline proposal, and if that argument was the lack of need for a new line, they would use it. But others became genuinely convinced that there was no compelling need to boost reliability of service in that area; or that, if indeed there was a need, there were other ways to meet it. In short, the fierce community opposition to the ridge proposal did serious damage to the underlying 'need' argument. So, as Hawaiian Electric moves forward, it must face squarely the fact that many have concluded there is no need for this project at all. That is, technology and time may have presented us with other options to what is by now a mature power distribution system. **Honolulu Advertiser. Thursday, May 15, 2003.** (emphasis added)

Editorial: Meetings will shed light on HECO plans. "But it appears that HECO has skipped a step in the process -- that is, to demonstrate the need for the backup system, one of the issues that led to the state's rejection of the Waahila plan. ... HECO contends the transmission lines are necessary for dependable service to the island's urban core as well as to Windward Oahu from the North Shore to Makapuu. This conflicts with a report from a state-appointed hearings officer, retired Judge E. John McConnell, that "the public benefit or public need for this project has been substantially overstated by HECO." **Honolulu Star-Bulletin. Friday, May 16, 2003** (emphasis added)
http://starbulletin.com/2003/05/16/editorial/editorials.html

Editorial: Expect more static on HECO proposal. NOW that Hawaiian Electric has answered the multimillion-dollar question about where it will lay new transmission lines, the company's next task will be to convince ratepayers and critics that the lines are truly needed and that its latest plan is the best way to achieve power reliability. That may prove formidable. ... Decentralized or on-site power generation that would improve reliability and eliminate the need for miles of transmission lines at the same time are concepts HECO should consider, if not now, at least for future improvements. Centralized systems are more vulnerable to weather-related events like hurricanes as well as to terrorism. Advances in electricity production and distribution should be analyzed with the eye to future needs as new housing and commercial development will continue to tap into the grid. The company maintains that unless it can install the lines, Oahu is at risk for massive power failures. However, a hearings officer in the Waahila case -- citing HECO's own assessment that reliability gains would not justify the plan's $31 million cost

and that the company rates its reliability at 99.98 percent -- disputed that claim. The issue of need remains the toughest HECO will have to overcome as it seeks public and government approval for its project. **Honolulu Star-Bulletin. Saturday, October 11, 2003.** (emphasis added) http://starbulletin.com/2003/10/11/editorial/editorials.html

G) Often different sectors of society -- engineers, lawyers, environmentalists, the public -- uses terms in different ways. It is important, in establishing a sound record, to clearly define what key terms mean and what assumptions are used. It is also very important to footnote and document the source for everything.

H) The term "need" has been used and misused by many. But what is need? The BLNR had to determine if there is a "public benefit" for this project. The PUC must determine if the project is "reasonable" and "in the public interest". If so, then the PUC will "approve" the project. Later, in a rate case, the PUC must determine if an already built project is "needed", that is, if it is "used and useful." This is called the "needs" test. These are "terms of art" or "words of art". That is, they are words that have a particular meaning to a particular area of study, and either have no meaning or a different meaning outside of the particular field. The public use of the term "need" is in a broader context. Utilizing the PUC language, we argue that the project is not reasonable nor is it in the public interest.

I) Another term tossed around is "reliability". HECO files an Annual Service Reliability Report with the PUC detailing reliability figures for the past five years. HECO 1998 Annual Service Reliability Report states: "The reliability indices are calculated using the data from all sustained system outages" that is, "an interruption of electrical service of 1 minute or longer." Momentary outages (less than one minute in duration) are excluded. Acts of God are also excluded. These are "abnormal situations such as hurricanes, tsunamis, earthquakes, floods, catastrophic equipment failures, and single outages that cascade into a loss of load greater than 10% of the system peak load." HECO's Annual Service Reliability Reports have normalized system

disturbances (that is, have remove major system impacts from reliability indices), including (a) the April 9, 1991, island wide outage; (b) the September 11, 1992, Hurricane Iniki outage; (c) the August 24, 1993, Koolau pole fire; (d) the October 31, 1994, Pukele Substation load shedding; and (e) the November 5, 1996, AES load shedding.

To the community, reliability and outages refer to the same thing, while to HECO and the Hawaii PUC, reliability refers to interruptions of electrical service that last at least one minute but are not catastrophic in nature. Utility commissions in other states use their own unique definitions of reliability (altering the length of time for momentary outages and including/excluding different activities as Acts of God).

J) The term Catastrophe (Act of God) requires elaboration. Catastrophic outages have greater impact that those that are included in reliability indices.

The PUC, in Docket No. 95-0051 (Re Self-Insured Property Damage Reserve for Public Utilities) stated that the utilities proposed setting up a contingency fund to have money available for emergencies. The Department of Defense, the Consumer Advocate and the PUC disagreed with the utilities approach. "The Consumer Advocate and DOD urge the rejection of the utilities' proposals and a continuation of the current practice of post damage review and after-the-fact recovery, as we authorized in Decision and Order No. 14859. They maintain that reserves will promote, not resolve, intergenerational inequities among ratepayers, and that the prior collection of reserve funds is not rational when the timing and severity of damage are difficult to predict." The PUC ruled that events with "unknown probabilities" that result in damage of "uncertain magnitude" should be dealt with in an after-the-fact appraisal. PUC D&O 16228 (March 4, 1998) See www.pur.com/pucsummaries/233.html

HECO is now arguing that they want to build infrastructure instead of setting up a contingency fund, to prepare for events with unknown probabilities and uncertain magnitudes.

This docket is proposing to do something to prevent an Act of God, without analyzing the relative probabilities of different parts of the system failing, the relative magnitude or impact from such potential failures, or the availability of existing alternatives such as back-up generators.

Risk management deals with analyzing all possible risks, and setting up procedures to avoid, minimize or cope with its impact. Events can have: (1) high probability/high impact; (2) high probability/low impact; (3) low probability/high impact[6]; (4) low probability/low impact; or, in this case, (5) unknown, but low probability & possible, but unknown, high impact.

There are an enormous amount of construction that could occur if funds were unlimited. Priorities must be ranked based on probabilities/impacts, or, costs/benefits.

HECO's scare tactics attempts to warn the populace against the devastating possibility loss of the Waikiki economic engine without comparing this remote possibility to events that could wipe out the entire economy of the state: global warming, ocean based oil spills[7], land based oil spills[8], tsunamis[9], high winds, hurricanes[10], wildfires[11], landslides, heavy rains/flooding, volcanoes, grid failures (cane fires, vegetation/line

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[6]also called low probability/high risk; high impact/low probability; high impact extreme event
[7]DBEDT has studied the impact of such an event and its potentially devastating impact on tourism
[8]The Waiau Oil Spill (1996) could have been far worse
[9]Hawaii has been hit with significant tsunamis which have done major damage
[10]Hurricane Iniki and Iwa had major impact. Hawaii could be hit with a Level 5 hurricane
[11]In late 2001 a transmission line triggered a fire in Aiea

interactions, de-energized lines, vehicle/pole interactions). Why choose this particular one ... could it be to recover the $19M wasted on the Wa`ahila Ridge fiasco?

K) Live Line Maintenance

1) HECO noted that a large number of structures in the Koolau's could be maintained through Live Line Maintenance (1990):

> "Subject: Live Line Maintenance (LLM) -- Waiau-Koolau, Waiau-Koolau-Pukele and Halawa-Koolau-Pukele Circuits. The following is an assessment of performing LLM work on the Waiau-Koolau, Waiau-Koolau-Pukele and Halawa-Koolau-Pukele 138kv circuits, from point of origin to Koolau Substation. As an introduction and to present an overview, I have identified the different levels of LLM work and the level at which our LLM personnel are presently performing. ... This increased proficiency, however, is dependent on our Training Facility being completed and our in-house training programs being implemented on a timely basis." (HECO Interoffice memo from G. Okura to L. Benedict, dated May 11, 1990. DN 6281. CA-IR-87.page 2 of 4). (Emphasis added).

2) HECO's analysis went on to look at specific structures:

Break Down of Structures that Can (Yes) / Can Not (No) be Worked on Utilizing LLM Techniques:

Circuit Structures	Yes	Yes, with Additional Training/retrofitting	No	Total
Wai-Koo	40-53%	33-44%	2-3%	75
Wai-Koo-Puk	52-64%	27-33%	2-3%	81
Hal-Koo-Puk	17-36%	29-62%	1-2%	47
TOTALS	109	89	5	203
%	54%	44%	2%	

(HECO Interoffice memo from G. Okura to L. Benedict, dated May 11, 1990. DN 6281. CA-IR-87. page 3 of 4)

3) HECO's Integrated Resource Planning (1993): "All future transmission lines will be designed for live wire maintenance." (HECO's 1993 Integrated Resource Plan. Section 6.3.3.5 Live Line Connections. BLNR CDUA 2801. CDUA Discovery Item HO2716)

4) Kamoku-Pukele 138-kV Transmission Line Alternatives Study (1995): "Live-line maintenance has been performed on some portions of the Halawa-Waiau-Koolau-Pukele lines. ... Over the next 5 years, the number of live-line crews is expected to grow." (Kamoku-Pukele RFEIS, Volume II, Appendix C, page 4-21)

5) Public Utilities Commission Decision & Order 17099 (1999): "HECO should increase the number of authorized lineman personnel in the live-line section from 15 to 20, and initiate training to bring the live-line section to full strength as soon as possible." (PUC D&O 17099)

6) HECO Filed its PTI Recommendations Status Report with the PUC on May 18, 2001

> Attached, for the Commission's information, is the latest summary and status report on HECO's progress in implementing the recommendations by Power Technologies, Inc.

7) The PTI Recommendations Status Report consists of PTI Recommendations; the time/cost of implementation; and the last activity by HECO:

> Project 3: Implement. Increase the number of authorized lineman personnel in the live-line section from fifteen to twenty. Initiate training of the required number of people to bring this Section to this strength as soon as possible. Implement: Begin: 1/2/1994. End: 12/31/2001. % Done: 60%. Total Cost $533,000. Date of Status Update: 1/26/01. The manning level will be re-evaluated pending the approval of the RCM Study.
>
> Project 4. Implement. Study the present recommendations presented by others in conjunction with the implementation of the live-line work program, with particular emphasis on the strengths required in structures when doing the work. Purchase the tools still required for the 'advanced' level or [sic] work, including structure replacements on wood pole lines, and the handling of insulator changes, etc., on aluminum structures and deadend towers. Implement the concept of doing all work using live-line work. Implement: Begin: 1/2/1994. End: 12/31/2002. % Done: 0%. Total Cost $275,000. Date of Status Update: 1/26/01: A Study will be done with the assistance of the Engineering's Structural Section.
>
> Project 9. Establish a joint 'committee' that will be on-going and have a membership of those individuals from the Power Delivery group who are associated with the 138 kV transmission system to study, discuss, plan, and validate the live-work functions taking place, or proposed, within HECo. Implement: 1/2/1994. End: 12/31/1995. % Done: 100%. Total Cost $120.000. Date of Status Update: 2/6/96. The joint committee could be a resource group that would be used on an 'as needed' basis to facilitate live-line maintenance. After the Company's reorganization, a group called Technical Services Division was formed to provide the 'as-needed' resource.

Project 13: Study/Implement. Study the present live-line work Training Program to see if it does provide for the growth in the skill levels associated with full structural replacement (that work practice is needed to both justify the program and reduce outages). Consider the concept of having advice from other utilities or people who have experience with a diverse structure transmission system to obtain ideas that will address the present concerns in a positive manner. Study: Begin: 1/2/1996. End: 12/31/1998. % Done: 100%. Total Cost: $70,000. Date of Status Update: 7/24/98: The Training Section has completed Modules 1, 2, & 3. These training modules pertain to repairing tangent, angle, and double deadend structures. The training is being implemented.

Project 57. Implementation. HECo should become more active in technical organizations associated with live-line work and their conferences. "Implement: Begin: 1/2/1994. End: 12/28/1998. % Done: 100%. Total Cost: $72,000. Date of Status Update: 7/24/98. HECo representatives attend the EEI Transmission and Distribution Committee meetings. HECO is also a member of EPRI's Transmission Target. HECO plans to be an active member of various relevant technical organizations.

67 Study/Implement. Study the wage relationships, including the total earnings, among the different departments associated with the live work activity people. Determine if the present differential for live work training of 2% is still appropriate. "Study: Begin: 1/2/1994. End: 6/30/1996. % Done: 100%. Total Cost: $25,000. Date of Status Update: 2/3/98 The study was completed. The current differential for Live-Line work of 2% is still appropriate.

90. Study/Implement. Review the structure designs proposed for the retrofit and rebuilding programs to determine if they still are well suited to live-line work." Study: Begin: 1/2/1994. End: 12/31/2002. % Done: 15%. Total Cost: $50,000. Date of Status Update: 1/26/01: In conjunction w/Recommendation No. 4, a study will be done to identify the structures suitable for live-line work.

8) For HECO's EOTP, EDM International wrote a tract on Live Line Maintenance. (December 2003)[12]:

"Another factor that impacted transmission maintenance was that during the early to mid 1990s, the condition of the distribution system was beginning to deteriorate and required more attention; therefore resources from the LW program were redirected to focus on the distribution system. The last LW performed on the 138 kV system was an insulator-washing project by USAirmobile in 1996." (page 18) (emphasis added)

"Most craft personnel with LW training have left the company, moved to different departments, or have not performed LW for a considerable period of time." (page 20) (emphasis added)

"HECO personnel indicated ... that there was a desire to maintain LW skills within the company and that plans were being formulated to provide initial training. ... While still in the conceptual stages, the guiding principle is to develop a plan that encourages

[12]HECO's East Oahu Transmission Project. PUC Docket No. 03-417. Exhibit 7. Evaluation of the Applicability and Practicability of Live Working (LW) Methods for Hawaiian Electric Company, Inc.'s (HECO) 138 kV Transmission System

maintenance of the relevant skills and enables LW to be performed as needed. Also, crews may be required to use LW work methods on occasion even when the lines are de-energized. This represents a proactive and effective approach to maintaining LW skills." (page 20)

"Based on the results of interviews and discussions with HECO personnel it is apparent that HECO is in the process of revising and refining its transmission line maintenance program." (page 22)

9) HECO submitted the EDM Live Line Maintenance Report (Exhibit 7), the testimony of EDM President Andrew H. Stewart (Exhibit T-5), and Andrew H. Stewart Educational Background and Experience (HECO-500). Nothing in these documents reveal any educational background, prior testimony, prior authorship, or prior analysis by Mr. Stewart regarding live wire maintenance, nor did a Google Search of the world wide web come up with any such connection.

L) Load. Sufficient transmission lines need to be in place to handle the single highest peak load of the decade. In 1998, the average daily minimum and maximum loads on the Oahu grid were 541 MW and 1021 MW respectively. The large daily swing (480 MW) means that the transmission lines are often used far below capacity. Load Leveling (peak shaving) techniques level the daily and yearly load swings. This allows for expansion in electricity throughput while minimizing the peaks, thus delaying the need for new lines.

HECO has stated that: "For distributed generation to provide the same reliability improvements as the Kamoku-Pukele line, at least 200 MW of distributed generation would have to be installed" (EXHIBIT H-70: DG Alternatives, page 1, paragraph 1)

Why is 200 MW of DG needed if HECO's proposed transmission line project is not built? The peak load at the Pukele Substation was 250 MW (1986), 200 MW (2000) and 192 MW (2003). Based on HECO's EOTP Community Advisory Group, the residential customers appear to be satisfied with the level of reliability they have now.

Commercial customers may need higher reliability. For commercial customers, there exists 39 MW of back-up generators in the Pukele Substation Area; another 40 MW can be transferred to neighboring substations in the event of a disaster using Distribution Automations. Some of the commercial load can be shed through voluntary curtailment. Some commercial customers, requiring high levels of reliability (six nines), will never get sufficient reliability from the grid. Therefore they must install on-site generation. There are newly opened PUC dockets exploring DG and CHP.

Do the math: 192 MW peak use **minus** the residential customers load (x MW) **minus** existing backup generators (39 MW) **minus** substation transfers (40 MW) **minus** existing load shedding arrangements (y MW) **minus** new CHP/DG installations (z MW) **minus** ... other stuff **equals** the additional commercial load that may be needed. How many MW does this represent? According to HECO: 200 MW!

Another oddity is why would the new DG cost so much. The 39 MW of existing backup generation cost the ratepayers nothing. Yet HECO states that increasing the amount of backup generation by five (195 MW) would cost the ratepayer $100,000,000.00 Why?

Look at cost comparisons. The $100 MW cost for 200 MW of DG looked like a lot when HECO claimed Kamoku-Pukele would cost $31M. But that was engineering costs. According to HECO, the total cost of financing Kamoku-Pukele would exceed $120M. What is the true cost comparison between DG and Transmission Lines?

It is less than credulous for HECO to claim that 192 MW can provide the entire energy needs of the Pukele Service Area during peak periods, while, according to HECO, 39 MW of back-up generators can provide only for a few emergency lights for stairwells and elevators.

HEI's Auditor, KPMG, found that 29% of the Netherlands electric needs can be met with rooftop solar. All of HECO's Sun Power for Schools are on rooftops. Most commercial combined heat and power units are located inside buildings. Yet according to HECO, if distributed generation were used as an alternative to transmission lines, it would have to be build on vacant lots. HECO adds that there are not enough vacant lots in the Pukele Service Area. Therefore, HECO concludes, the option should not be considered. HECO's self-serving statements on DG are not credible.

During the closing days of the Kamoku-Pukele contested case evidentiary hearing, HECO abruptly withdrew their DG expert witnesses. These witnesses were saved from cross-examination.

M) Overhead v. Underground Policy. The PUC noted:

> "The Commission agrees that laying transmission lines underground promotes aesthetics and preserves scenic views. However, the utility has the responsibility to minimize the cost to ratepayers in providing reliable electric service . . . . [T]he cost of placing transmission lines underground is very high and the burden of that cost ultimately falls upon the ratepayers. Thus, unless (1) there is a compelling reason (which outweighs the costs) to place the lines underground or (2) there is a stated public policy requiring the lines to be laid underground or (3) the ratepayers as a whole consent to bear the high cost of putting the lines underground, we do not believe that we should require HECO to place the transmission lines underground. That placing the transmission lines overhead may obstruct one's view plane, in and of itself, is not sufficient cause to require the ratepayers to bear the cost of laying the lines underground." PUC Order No. 13201 (Docket No. 7256 In the Matter of the Application of HAWAIIAN ELECTRIC COMPANY, INC. for approval ... of Waiau- CIP 138 kV #1 & #2, Part 2, transmission lines) citing In re Hawaii Electric Company, Decision and Order No. 10620, entered May 8, 1990. See 151 P.U.R. 4th 30 at 44-45. Cited by the Hawaii Supreme Court No. 18156: In re Hawaiian Electric Co., 81 Haw. 459, **918 P.2d 561** (1996)

HECO stated in this docket that they will pick up the additional cost of undergrounding. LOL doubts they meant their stockholders. No doubt, HECO meant the ratepayers. HECO will comply with the PUC condition to cover the added cost of

undergrounding, by assuming the cost themselves, and then transferring that additional cost to their ratepayers. The PUC will have to determine if the ratepayers are willing to bear the costs. This could be ascertained at a PUC sanctioned hearing. The hearing would be required if the ratepayers were not willing to pay the added cost, and something were to be built overhead. The willingness to pay the costs may be directly related to whether the ratepayers believe that the line is needed in the first place.

N) Laws, Rules, Policies

Hawaii State Constitution, Article XI, Section 1

> the State ... shall conserve and protect ... natural resources, including ... energy sources, and shall promote the development and utilization of these resources ... in furtherance of the self-sufficiency of the State. (emphasis added)

This amendment was added by the 1978 Constitutional Convention. The Committee on Environment, Agriculture, Conservation and Land's Standing Committee Report ("SCR") No. 77 was the only committee report from the ConCon dealing with this amendment:

> Your Committee on Environment, Agriculture, Conservation and Land ... begs leave to report as follows ... The consensus of your Committee with regard to self-sufficiency was to constitutionally recognize the growing concern and awareness of Hawaii as being overly dependent on outside sources for, among other resources, food and energy. Your Committee spent much time considering the need for a separate section on an energy policy for the State. However, it was concluded that the promotion of energy conservation, the development of clean, renewable sources of energy, and the achievement of increased energy self-sufficiency would be adequately covered by the provisions of this section. (emphasis added)

Hawaii Revised Statutes HRS §196-1 Energy Resources

> The State of Hawaii, with its total dependence for energy on imported fossil fuel, is particularly vulnerable to dislocations in the global energy market. This is an anomalous situation, as there are few places

> in the world so generously endowed with natural energy: geothermal, solar radiation, ocean temperature differential, wind, waves, and currents--all potential non-polluting power sources.

Hawaii Revised Statutes §226-18 State Energy Plan

> Objectives and policies for facility systems--energy. (a) Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:
>
> (1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;
>
> (2) Increased energy self-sufficiency where the ratio of indigenous to imported energy use is increased;
>
> (3) Greater energy security in the face of threats to Hawaii's energy supplies and systems; and
>
> (4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use.

DLNR Acceptance Report (Section 4):

> The Hawaii Energy Strategy 2000 makes reference to energy supply. The strategy refers directly to the problems associated with centralized energy generation and associated problems with the siting of transmission facilities. The plan also recommends use of DG to enhance efficiency and avoid line losses. HECO feels that this project does not conflict with these provisions. While the project may not conflict with these provisions, it certainly does not implement them. (emphasis added)

O) This Motion to Intervene is filed according to the requirements of Hawaii Administrative Rules ("HAR") §6-61-55 Intervention. (a) A person may make an application to intervene and become a party by filing a timely written motion in accordance with sections 6-61-15 to 6-61-24, section 6-61-41, and section 6-61-57, stating the facts and reasons for the proposed intervention and the position and interest of the applicant.

A person may make an application to intervene (HAR §6-61-55(a)). LOL is a person as defined by HAR §6-61-2.[13] LOL has filed a timely Motion to Intervene as specified

[13] HAR §6-61-2 Definitions: "'Person' means and includes individuals, partnerships, corporations,

under HAR §6-61-57.[14] In this case, HECO filed their application on Thursday, December 18, 2003. The public has 20 days, until Wednesday, January 7, 2004, to file. This 20 days INCLUDES 3 weekends, 2 of which are 4-day weekends. Thus the public has 10 working days coinciding with the Christmas festivities.[15] LOL has complied by filing this Motion on Tuesday, January 6, 2003. LOL will be represented by LOL's Vice President for Consumer Affairs, Henry Curtis, in accordance with HAR §6-61-12.[16] LOL requests that our Motion to Intervene be decided at a hearing, as set forth in HAR §6-61-41.[17]

P) HAR §6-61-55 Intervention. (b) The motion shall make reference to:

1) <u>The nature of the applicant's statutory or other right to participate in the hearing;</u>

a) The Hawai`i State Constitution (Article XI, Section 9: Environmental Rights) states: "Each person has the right to a clean and healthy environment, as defined by laws relating to environmental quality, including control of pollution and

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associations, joint stock companies, public trusts, organized groups of persons, whether incorporated or not, receivers or trustees of the foregoing, municipalities, including cities, counties, or other political subdivisions of the State, or any agency, authority or instrumentality of the State or of any one or more of the foregoing."

[14]HAR §6-61-57 "Time to file. A motion to intervene or participate, to be timely, shall be filed and served as follows: (3) A motion to intervene or participate shall be served on all parties and the consumer advocate and filed, in the proceedings other than those specified in paragraphs (1) or (2), no later than: (A) Twenty days after an application is filed."

[15]This was similar to the situation HECO offered the community in their Kamoku-Pukele Environmental Impact Statement Preparation Notice (EISPN). The comment clock on the EISPN started clicking on December 23, 1995. Arrogant but legal.

[16]HAR §6-61-12 "Appearance before the commission. (a) Any party to a proceeding before the commission may appear in person or may be represented by a partner or by an officer or authorized employee of a corporation, trust, or association."

[17]HAR §6-61-41 Motions. "(b) Every motion, except one entitled to be heard ex parte, shall indicate whether a hearing is requested on the motion. If a motion requires the consideration of facts not appearing of record, it shall be supported by an affidavit or affidavits. Motions shall be served in accordance with section 6-61-21. ... (f) If a hearing is requested, the movant shall obtain a date and time for hearing on the motion from the chief clerk."

conservation, protection and enhancement of natural resources. Any person may enforce this right against any party, public or private, through appropriate legal proceedings, subject to reasonable limitations and regulations as provided by law."

On an appeal by Life of the Land, the Hawaii Supreme Court opinion re In Re Application of Hawaiian Electric Company, Ltd.,56 Haw. 260 (1975) stated:

> "The practical effect of denying the appellants standing would be to silence the voice of all those who would speak in the public interest."

The principle case defining standing requirements in the courts of Hawaii is Life of the Land v. Land Use Commission, 63 Haw. 166 (1981) (hereinafter "LOL v. LUC"). in this case, the Hawaii Supreme Court addressed the issue of whether LOL and some of its members "who are neither owners of reclassified land nor owners of adjoining reclassified land have standing to invoke judicial scrutiny of the procedures followed" by the LUC. 63 Haw. at 169. In deciding conclusively that LOL had standing, the Hawaii Supreme Court set forth the applicable law:

> Standing is that aspect of judiciability focusing on the party seeking a forum rather than on the issues he wants adjudicated. And the crucial inquiry in its determination is "whether the plaintiff has 'alleged such a personal stake in the outcome of the controversy' as to warrant his invocation of ... [the court's] jurisdiction and to justify exercise of the court's remedial powers on his behalf." Warth v. Seldin, supra, 422 U.S. at 498-99 (original emphasis). ...
>
> The Land Use Commission's argument speaks of an absence of adequate, legally recognized interests, personal and peculiar to Plaintiffs. In some respects it is reminiscent of a view, formerly espoused, that standing depended upon the presence of a 'legal right, - one of property, one arising out of contract, one protected against tortious invasion, or one founded on a statute which confers a privilege.' Tennessee Electric Power Co. v. Tennessee Valley Authority, 306 U.S. 118, 137-38 (1939). But the Supreme Court has not adhered to the foregoing principle where challenges to administrative action are involved. 'Legal interests' as the standard to determine standing to contest governmental action was expressly rejected in Association of Data Processing Service Organizations v. Camp. 397 U.S. 150, 153-54 (1970), where the Court concluded the relevant inquires were whether the Plaintiff alleged the challenged action caused him injury in fact and whether the interest for which protection was sought lay within the zone of interests protected or regulated by the statute or constitutional guarantee in question. Id at 152-53. ...

> Moreover, our opinions over the past decade have reflected an awareness of the transition from "legal right" to "injury in fact" as the federal standard in the realm of environmental concerns for judging whether a plaintiff's stake in a dispute is sufficient to invoke judicial intervention. Granting textual dissimilarities, the Hawaii decisions have paralleled, in substance, the evolution of federal doctrine. 63 Haw. at 172-74 (footnote omitted).

The Hawaii Supreme Court further clarified the expansion of standards allowing standing to challenge agency actions:

> The expansive trend in defining injury for standing purposes was noted in a footnote to the . . . citations of United States v. SCRAP and Sierra Club v. Morton, reading: "We note that the trend in American jurisprudence as evidenced by recent decisions of this court and courts across the land, has been to broaden the class of persons that have standing to challenge agency action. The United States Supreme Court has clearly indicated that standing cannot be confined only to those who allege economic harm, nor can it be denied to others simply because many persons share the same purported injury. . .' Id. at 195.

Thus, the Hawaii Supreme Court provided the following direction for the courts: ". . . our basic position has been that standing requirements should not be barriers to justice.: Id. at 174 (emphasis added). See also, Mahuiki v. Planning Commission, 65 Haw. 1, 7-11 (1982); Town v. Land Use Comm'n., 55 Haw. 538 (1974); East Diamond Head Association v. Zoning Board of Appeals, 52 Haw. 518, 523 (1971); Davis. The Liberalization of Standing, 37 U. Chi. L. Rev. 450, 473 (1970).

The Supreme Court, thereupon, decided the specific issue of whether LOL, whose members were not owners of either the affected or the adjacent land, had legal standing:

> [T]his court has in recent years recognized the importance of aesthetic and environmental interests and has allowed those who show aesthetic and environmental injury standing to sue where their aesthetic and environmental interests are "personal" and "special", or where a property interest is also affected. Life of the Land, Inc. v. Land Use Commission, 61 Haw. 3, 8 (1979).

The allegations by LOL in its Complaint were deemed sufficient to establish aesthetic and environmental injury, thereby according LOL standing as a party who was

"specially, personally and adversely affected by the agency action." 63 Haw. at 175-76.

Thus the Supreme Court held unequivocally:

> Life of the Land and its members have a 'stake' in the outcome of the alleged controversy adequate to invoke judicial intervention, even though they are neither owners nor adjoining owners of land reclassified by the Land Use Commission in the 1974 boundary review." Id. at 176-77

The Hawaii Intermediate Court of Appeals ("ICA") issued a ruling in 2001 on the Environmental Rights clause of the Hawaii State Constitution (Article XI, Section 9)[18]

> Furthermore, we are mindful that standing requirements may be 'tempered' or otherwise 'prescribed' by legislative declarations of policy. Life of the Land, 63 Haw. at 172, 623 P.2d at 438. The Life of the Land court specifically identified "HRS Chapter 632, Declaratory Judgments, and Hawai`i State Constitution, Article XI, Section 9, Environmental Rights[,]" as examples of such declarations. Id. at 172 n.5, 623 P.2d at 438 n.5 (citations omitted).

b) Hawaiian Electric Light Company ("HELCO") proposed building two overhead 69-kV electric transmission lines from the planned Puna Geothermal Ventures ("PGV") facility at Pohoiki to HELCO's Puna Substation. The PUC Docket was dated September 6, 1989. (See PUC Docket No. 6523). The Puna Community Council ("PCC") (a coalition of 23 organizations) filed an application to intervene on September 26, 1989, which was the last day of the 20-day window for filing the motion.

The PUC found "that the contents of PCC's application does not comply with Rule 4-1 of the Commission's Rules." (emphasis added). (Decision and Order 10358. Docket Number 6523). Instead of rejecting PCC's Motion to Intervene, the PUC gave PCC another opportunity to intervene. The PUC ordered PCC to submit an amended

[18]Bremner v. City and County of Honolulu, Intermediate Court of Appeals, No. 22540 (2001)

application. PCC then filed an amended Motion to Intervene, dated October 10, 1989, written by attorney Cynthia Thielen, which read, in part:

> "This standing to intervene and become a party has been acknowledged by former PUC Chairman Hideto Kono in his letter to former Senator Robert N. Herkes, Exhibit A hereto. In noting that the PUC expected the Puna Community to participate in the PUC proceeding, the Chairman stated: ... 'I assure you that the transmission line placement issue will be carefully weighed by the Commission with ample opportunity for the parties to present their facts, opinions and concerns.' (Emphasis added)." Memorandum in Support of Puna Community Council's Application to Intervene. Cynthia Thielen, Attorney for Puna Community Council. October 10, 1989.

The PUC granted PCC intervenor status.

c) HECO filed an application (Docket No. 7256), dated March 12 1992, to build transmission lines between their Waiau Power Plant and Campbell Industrial Park ("Waiau-CIP"). The public was given 20 days to intervene. Fifty-one (51) weeks after the application was filed, two groups, the Village Park Community Association (VPCA); and the Tungpalan Appellants (16 county and state legislators) applied to intervene.[19]

HECO did not object to this very late intervention:

> "In accordance with Commission Rule 6-61-41, this notifies the Commission of Hawaiian Electric's ("HECO") position on the Motion for Enlargement of Time to Intervene and Motion to Intervene filed by the Village Park Community Association ("Movant") dated March 5, 1993 ("Motions") in the above referenced docket.
>
> HECO Position. With certain reservations and this opportunity to state its concerns surrounding the Motions, and providing the Movant does not broaden the issues or delay the proceeding, HECO does not oppose the Commission's granting of the Motions. HECO is taking this position, because of its conviction that, despite earlier opportunities, it is important that the Movant have an opportunity to state its position regarding the proposed transmission line before the Commission. HECO has consistently sought and considered public and governmental input to its proposed project, as evidenced by a record of its public and agency consultation attached as Exhibit A. Building new

[19]The PUC noted in their D&O that "No person filed a motion to intervene by the deadline." The initial Amfac motion to intervene was filed on April 3, 1992 and was rejected. On October 30, 1992, the PUC issued Stipulated Prehearing Order No. 11998. Among other things, the order established the following schedule: November 18, 1992, for HECO's direct testimonies; January 27, 1993 for the Consumer Advocate, Amfac, and WCC written testimonies; March 24, 1993 for HECO's rebuttal testimonies; and April 7, 1993 for the evidentiary hearing. The evidentiary hearing was held over a 14-day period from April 7 to May 3. Parties filed their Opening Briefs on June 28, 1993. The PUC allowed HECO to re-open the evidentiary hearing to hear emf testimony on July 29, 1993.

transmission lines between our Waiau Power Plant and Campbell Industrial Park is currently HECO's highest priority to address reliability of electric service to our customers. The project under consideration in this docket will form a portion of those lines. HECO's position with regard to these Motions is based in large part on Movant's following statement. 'The Community Association does not seek to delay the proceedings on this matter. The Community Association understands that a Prehearing Order with time deadlines has been set for this docket, and seeks by this Motion to have full participation rights as intervenors within the deadlines that have already been established.'" (HECO filing dated March 12, 1993)

Nor did the Consumer Advocate object:

"The Consumer Advocate does not oppose the granting of the motions and therefore defers to the Commission's exercise of its discretion with one caveat. In assessing the merits of the motions and in course of exercising its discretion, the Commission should not grant the motions on the basis of a specious legal argument. In the motion filed by the group of elected officials, the movants argue that they have been denied their fundamental due process since the Consumer Advocate did not adopt rules setting forth the criteria by which the Consumer Advocate arrives at his position." (Consumer Advocate letter to the PUC, dated March 12, 1993)

HECO Attorney Tom Williams stated:

"This Commission has bent over backwards to accommodate the new intervenors. They were granted intervention although they filed 11 months too late, and only one month before the hearing. They were allowed to submit written testimony and to provide witnesses, although the intervenors themselves did not even request that. They were allowed to do it only one week prior to the commencement of the hearing." (Evidentiary Transcript: April 7, 1993, page 14, lines 7-14)

Tungpalan Appellants attorney Colleen Sakarai noted:

"We concur that the Commission has in fact bent over backwards in allowing us to intervene." (Evidentiary Transcript: April 7, 1993, page 14, line 24 to page 15, line 1.)

d) The Consumer Advocate has recognized the critically vital role community groups play in utility decision making procedures (1997):

"Over the years, unfunded groups have been credited with raising important public issues to the PUC's attention. For example, without the persistence and active participation of rural Big Island residents who were fed up with antiquated multi-party telephone lines, the PUC may not have ordered GTE Hawaiian Tel to upgrade all rural areas in the State to single-line service. Similarly, long-range energy planning (called integrated resource planning) is in part the result of several parties, many of them community groups and unfunded, requesting the PUC to act. Generally, community intervenors have been forced to rely on free legal and consulting services. Yet, they have infused we so-called 'experts' with new ideas. They have reminded us of the critical impact of essential utility services on life's basic necessities. With a modest funding source, these and other groups should be able to continue and enhance their role. Another situation where ... there are consumer groups with conflicting interests. At that point, our office is forced to select

and advocate one position." Senate Bill No. 1918 (1997). Presentation of the Department of Commerce and Consumer Affairs to the Senate Committee on Commerce, Consumer Protection and Information Technology. Regular Session of 1997. February 10, 1997.

e) During the summer/fall of 2003, HECO invited a number of community groups to participate in a top-down presentation on their proposed East Oahu Transmission Project:

> "[HECO Vice President] Chuck [Freedman]: There will be a discussion of need and it will be detailed and occur before the PUC. PUC has an evidentiary hearing, court like in nature, Consumer Advocate represents public, opportunities for interveners, and need will be looked at in great detail. Public part is important, and so is info from company. That day isn't today, we're attempting to get proposals, and comments on impact and preferences. In this you folks are the experts, and you speak to that. Let me just say as clearly -- you can express, no need, one alternative, none. There will be another opportunity before the PUC." (emphasis added). Notes from Community Meetings. Codified by 3Point Consulting. page 33. HECO electronic compact disc submittal to the PUC re EOTP.

2) **The nature and extent of the applicant's property, financial, and other interest in the pending matter;** Life of the Land ("LOL") is Hawai`i's own environmental and community action group advocating for the people and the land since 1970. Our mission is to preserve and protect the life of the land through sustainable land use and energy policies and to promote open government through research, education, advocacy, and when necessary, litigation. LOL is a 501(c)3 non-profit organization with approximately 1000 members.

Life of the Land's Petition and Charter of Incorporation and Grant of Charter dated December 16, 1970 states: "The organization is organized for the following purposes: "... G. To assure by representation of the public interest in administrative and legislative procedures that approval of governmental or private projects be based on complete consideration of the long term public good; H. To bring, finance, support, encourage, or otherwise intervene in legal matters as may be appropriate to promote the public health, safety and welfare, conserve resources, preserve or restore natural beauty or correct environmental abuse."

Life of the Land's Energy Policy Goals and Objectives were formally adopted at its Board Meeting on July 13, 1981. "Problem: Hawaii's dependence on imported oil, increasingly expensive and in short supply, can and should be reduced. Goal: To meet the State's energy needs through conservation and low-cost, non-polluting resources."

Life of the Land's Board of Directors is authorized to act on behalf of its members. On Friday, September 22, 2000, the Life of the Land Board of Directors approved continuing to intervene in energy dockets as a means of promoting sustainable policies.

Life of the Land supports the increased use of renewable energy; the increased reliance on indigenous, non-geothermal fuels; decreasing the footprint of energy facilities; minimizing harmful environmental impacts (water, land, air, pollution, aesthetics); minimizing harmful cultural impacts; increasing the use of electronic (non-tree) filings; and opening up the governmental process.

When we first joined the fight against this proposed transmission line in March 1996, a lot of people didn't understand that energy is an environmental issue. While the fossil fuel industry has transformed a pre-industrial world into the information age, it did so at a great cost. Acid rain is eating away at our forests, global warming gases are heating up the planet, and oil spills are devastating ecosystems.

Just two months after our initial involvement in the proposed project, a major energy disaster occurred. On May 14, 1996, at 1:30 a.m., a Chevron pipeline BURST, discharging No. 6 bunker fuel oil adjacent to HECO's Waiau Power Plant. Over 41,000 gallons on oil gushed into Waiawa Stream. Being slightly heavier than the fresh water,

it slowly sank through the water table, contaminating life forms along its trip. Upon reaching Pearl Harbor, the oil slowly rose through the water column, being slightly heavier that salt water. The 10-acre Waiawa Marsh, a restricted wildlife area and home to the state's four endangered species of water birds (Hawaiian stilt, coot, duck, moor hen), was contaminated with pools of submerged oil. An oil sheen covered approximately 90,000,000 square feet of open water in Pearl Harbor during the first six days after the spill.

Areas impacted included freshwater and saltwater wetlands, shorelines and intertidal areas including mangroves, mudflats, rocky shorelines, sandy beaches, riprap, seawalls and piers. Regulators estimated that 77,965 linear feet of intertidal habitat was oiled.

The cleanup resulted in the repeated, episodic high-pressure washing of the Pearl Harbor shoreline, which destabilize and erode shoreline soils. The shoreline continued to emit an oil sheen more than a month. This had a devastating impact on egg, larval, juvenile and adult stages of recreationally and commercially valuable finfish, invertebrates, green sea turtles and birds.

Initially the federal and state regulators estimated that the habitat would take ten years to recover, this was later revised upwards to fifteen to twenty years.

Life of the Land's approach is to look at the big picture. The main reason for LOL's intervention is in furthering Hawai`i's energy self-sufficiency. Energy is the cornerstone of sustainability. This project further delays Hawai`i's transition to a clean energy future and will ensure that Hawai`i remains out of compliance with the Hawaii Energy Plan, all state plans and the Hawaii State Constitution. We must move beyond the fossil fuel era. In Hawaii there are practical, viable, feasible and cost-effective ways of promoting an alternative future; a future based on carefully

researched and analyzed alternatives that are scientifically defensible. We need to start down the road towards sustainability now. It requires us to take that first step.

A careful review of the alleged justifications for HECO's proposed Kamoku-Pukele transmission line led to some interesting and startling conclusions. First, the line is not needed. Second, if a need ever develops, there are alternatives which are cheaper, have less environmental and cultural impacts. Third, these alternatives would stimulate and diversify the local economy; they would help transform Hawaii from economic dependence on external forces (Hawaii runs a $13 billion/year trade deficit in goods and services), to one of greater local control of our own economic future.

Regarding HECO's proposed project, Life of the Land has made presentations before dozens of groups and organizations; has sought to increase public awareness and knowledge about HECO's proposal; to offer viable and feasible alternatives that decrease the environmental and cultural footprint; has met with the PUC in 1996; made presentations, and served on panels before several Neighborhood Boards, including Ala Moana/Kakaako, Aliamanu/Salt Lake/Foster Village, Diamond Head/Kaimuki/St. Louis Heights, Kalihi Valley, Kaimuki, Kuliouou/Kalani Iki, Liliha/Kapalama, McCully/Moiliili, Nuuanu/Punchbowl, Palolo, Pearl City, Waimanalo, Waipahu; served on panels at Town Meetings held at such places as Pake Hale, Ala Wai School Cafeteria, Palolo Elementary School; spoke in front of community groups such as the St. Louis Heights Community Assn. Forum; appeared on the Price of Paradise hosted by Randy Roth; addressed the Engineers & Architects of Hawaii; offered comments at meetings such as before the Historic Hawaii Foundation; brought in speakers including Dr. Donald Aitken; testified before state, county, and agencies regarding proposed legislation; and offered extensive comments on environmental impact statements.

3) The effect of the pending order as to the applicant's interest; Life of the Land is a non-profit Hawaii-based organization. Life of the Land is both a HECO ratepayer and a Hawaiian Electric Industries (HEI) stockholder. Our members live, work and recreate in East Oahu. They are concerned about energy policy, and the impact our energy choices have on land use, the environment, quality of life, aesthetics, and health, among other things. Some of our members are HECO, MECO, and HELCO ratepayers, and some are Hawaiian Electric Industries (HEI) stockholders. If this docket is approved, the Company will be locking in a future that will be detrimental to our members.

This project will continue to lock in an old, outdated, approach to energy policy in Hawaii, using low efficiency fossil fuel generators and long transmission systems. We need to move towards the future. This will not do it.

Our one major issue has always been Sustainability. This line is not needed. If anything is needed, there are cheaper and better alternatives. HECO policy seem to be aimed at creating an artificial need. This must stop. Sustainability is an environmental and cultural issue. Any attempt to impose an unneeded energy structure on our environment will negatively affect our environment.

The need for the project has not been determined. If the line is built, it will be used primarily to transfer electricity generated from extremely inefficient and dirty fossil fuel power plants to load centers. There are cleaner alternatives.

The exact alignment and the technology has not been determined. It should be noted that (1) during the BLNR Contested Case Evidentiary Hearing re Kamoku-Pukele, HECO suddenly offered a new proposed alignment; and (2) part of the Waialua-Kuilima 46-kV Transmission Line was constructed over one-mile from any of the Alternative Routes

listed in either HECO's EIS or HECO's Initial Application before the PUC. Part of the new alignment included orange balls on an overhead segment which crosses a gulch and can be seen from Kamehameha Highway.

The exact nature of the project has not been determined. The Hawaii Public Utilities Commission Rules of Practice and Procedure states: Any pleading may be amended at any time (6-61-20). The title "East Oahu Transmission Project" is exceedingly broad. The substance of the docket could change considerably while staying within the meaning of the project title. HECO could increase the number of transmission lines proposed (currently 0), subtransmission lines proposed (currently 9), offer alternatives that would delay the need for new lines, or amend or alter any of the proposed alignments. Furthermore, the nature of the lines -- overhead v. underground, shielded v. unshielded -- may be determined as the docket unfolds.

Whether the project will go overhead or underground is unclear. Whether HECO can assume the added cost of underground lines (to meet one of the PUC's three reasons for undergrounding), and then shift that cost to ratepayers, has never been ruled on by the PUC. The PUC could rule that the line must be build using overhead technology.

Life of the Land has members who live, work, and recreate in East Oahu. They are concerned about aesthetics, health, and environmental conditions within their neighborhoods.

Life of the Land is concerned about the impacts this project will have on our (A) environment: (1) the pesticides and preservatives used on poles, especially those by schools; (2) the impact of added EMF in and around residential neighborhoods; (3) aesthetic impacts from replacement towers (pole for pole replacement with the newer poles being bigger, uglier and more intrusive, causing further urban blight); (4)

construction impacts including noise, traffic and dust control, especially on children and elders, flora and fauna; (5) spills from transformers; (6) whether the project will increase or stunt conservation, renewable energy development, and/or distributed generation; (B) culture impacts including disturbing underground burials and other cultural sites; (C) societal: including environmental justice (the construction of infrastructure in poorer communities); (D) cumulative, including life cycle environmental, social, and cultural costs and impacts; and (E) how this line conforms to the State Energy Plan and the Hawai`i Constitution.

The PUC closed out Docket No. 96-0493 and a Docket on Distributed Generation. HECO has opened a docket on CHP. LOL filed a Motion to Intervene in both dockets. PUC approval of this docket, in its current form, would have a very negative impact on our interests and our ability to safeguard those interests in the DG and CHP dockets. Therefore we must be in this docket.

4) **Other Means Available Wherein Applicant May Protect His Interest.** There are no other means available to protect our interests. Dropping the ball at this point by not intervening would be foolish at best.

5) **Other Parties Do Not Represent Movants' Interests.** The existing parties are the fossil fuel based utilities (over 99.5% of electricity generated Hawaii utility-owned generators is created from oil), and the Consumer Advocate which "protects and advances the interests of consumers of regulated utility and transportation services in regulatory proceedings." (www.state.hi.us/dcca/dca/index.htm). The PUC noted: "The director of commerce and consumer affairs, as the consumer advocate and through the division of consumer advocacy, has the statutory responsibility to represent, protect, and advance the interest of consumers of utility services. The

consumer advocate, therefore, has the duty to ensure that the utility's integrated resource plan promotes the interest of utility consumers." (Framework II.E)

Life of the Land represents environmental interests. Life of the Land's mission is to preserve and protect the life of the land through sustainable land use and energy policies and to promote open government through research, education, advocacy, and when necessary, litigation. Consumer and environmental issues are distinct, although they overlap. Consumers buy goods and services, while environmentalists preserve and protect ecosystems. During the past several years, Life of the Land and the Consumer Advocate have often clashed at the Legislature over proposed policy and legislation. Our views have historically been quite distinct and divergent.

Under Hawaii revised Statutes (HRS) §269-54(b) "The consumer advocate may: ... (7) Represent the interests of consumers of utility services before any state or federal agency or instrumentality having jurisdiction over matters which affect those interests." Thus the Consumer Advocate could have intervened in the BLNR contested case hearing for HECO's proposed Kamoku-Pukele 138-kV Transmission Line project, but chose not to.

6) **Movants' Participation will Assist the Development of a Sound Evidentiary Record.** LOL participation will assist in the development of a sound record. As demonstrated in the Kamoku-Pukele BLNR contested case proceedings, and LOL-sponsored conferences, LOL will bring to the table several expert witnesses directly involved with, and knowledgeable about, transmission and generation options.

During LOL's successful 7-year campaign against the proposed Kamoku-Pukele 138-kV Transmission Line project we reviewed hundreds of HECO's technical engineering reports, studies and workpapers; dozens of US Securities and Exchange Commission

filings; and talked with dozens of experts . Our familiarity with key documents will help us to educate PUC staff and Commissioners. LOL's extensive knowledge of the merits of this case will enable the Commission to view and consider all of the pertinent available information.

> HECO's East O'ahu Transmission Project. Blocked from placing new power lines on scenic Wa'ahila Ridge, Hawaiian Electric Co. says it still needs a backup power system and has unveiled a plan that calls for an underground transmission line through one or more of three areas: Date Street to Palolo; Makaloa to McCully; and Ward to McCully. Hawaiian Electric seeks approval for power lines [by James Gonser]. HECO and its chief opponent, Life of the Land, give their arguments for and against the power lines. **http://the.honoluluadvertiser.com/current/ln/heco**

Life of the Land's Exhibit List will supplement the PUC record with key documents, focusing on reliability[20]; evidence introduced during the Kamoku-Pukele contested case hearing[21]; live line maintenance[22]; and relevant PUC Decisions and Orders[23].

7) **Movants' Participation Will Neither Unduly Broaden The Issues Nor Delay This Proceeding**. Life of the Land has a history of following PUC directives in previous

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[20]Investigation of July 1983 Blackout, Stone & Webster Management Consultants, Inc. (February 1984)
Pukele 138 kV Source Reliability Improvement Study, HECO System Planning Department (September 1986)
Pukele 138 kV Source Reliability Improvement Study, Revised, HECO (October 24, 1991)
Investigation of 1991 Oahu Island-Wide Outage, Power Technologies, Inc (August 26, 1993)
H-00837 through H-01141

[21] BLNR CDUA OA-2801 Contested Case Hearing Transcripts re Kamoku-Pukele 138-kV Transmission Line Project (November 2001)
Proposed Finding of Facts and Conclusions of Law, Judge E. John McConnell, Ret. (2002)

[22]HECO Interoffice memo from G. Okura to L. Benedict, PUC DN 6281. CA-IR-87 (May 11, 1990)
Investigation of 1991 Oahu Island-Wide Outage, Appendix IX -- Live Line Maintenance (pages IX-1 through IX-27; H001084 - H001110) Power Technologies, Inc (August 26, 1993)
PTI Recommendations Status Report, HECO. PUC Docket No. 6281 (HECO Outage Investigation).

[23]Public Utilities Commission Decision & Order 10358, Docket No. 6523 (HELCO Pohoiki-Puna 69-kV Transmission Line), dated October 10, 1989. 112 P.U.R. 4th 422
Public Utilities Commission Decision & Order 10358, Docket No. 7256 (HECO Waiau-CIP 138-kV Transmission Lines #1&2), . Also Motions to Intervene, dated March 5, 1993; HECO filing, dated March 12, 1993; Consumer Advocate letter to the PUC, dated March 12, 1993; Evidentiary Transcript
Public Utilities Commission Decision & Order 16228, Docket No. 95-0051 (Re Self-Insured Property Damage Reserve for Public Utilities), dated March 4, 1998. www.pur.com/pucsummaries/233.html

dockets we have participated in (96-0493 Restructuring; 99-0004 MECO IRP; HECO DSM). We have not asked for any time extensions, nor to expand the scope of dockets. In the absence of any primie facia evidence to the contrary, the PUC should accept our commitment to participate in good faith in this docket. Our comments, testimonies, expert witnesses and exhibits will be provided so as to strengthen the defensibility of the PUC decision.

Life of the Land has supported the idea of a back and forth discussion on DG and Reliability which would allow for the quick elimination of known falsehoods and allow decision-makers to quickly ascertain the credibility of different positions. Unfortunately, this discussion has been repeated deferred and delayed by the utility. For example, just before losing the BLNR Kamoku-Pukele contested case, HECO abruptly withdraw all their DG expert witnesses. At the East Oahu Transmission Project Community Advisory Committee meetings, the community had to write down questions on post-its which were answered by PR people. The utility has been unwilling to debate the community on the CHP/DG and Reliability issues, or to share engineering reports supporting such an approach. The debate needs to occur quickly so we can move forward. If there is any further delay, it will not come from us.

It should be noted that a docket is not a debate. The role of the commission is to determine if the proposal is "reasonable and in the public interest." However, an open discussion on CHP/DG could assist in the decision-making process and would probably result in faster PUC action. This debate should have already occurred.

Life of the Land will not obstructed or unreasonably delayed, or to attempted to obstruct or unreasonably delay, discovery proceedings or other proceedings, that is or would be prejudicial to the interests of any opposing parties. We do not seek to muddy the waters, but rather to bring clarity to the issues at hand. Allowing

intervention by Life of the Land and the filing of Life of the Land's comments and questions, and granting the other relief sought in this petition will merely place Life of the Land in the same substantive and procedural position as the other parties to these proceedings. Life of the Land will focus on issues that have significant probative value.

8) Movants' Interests Differ From Those Of Those Of The General Public. The general public is represented by the Consumer Advocate who represents all consumers. The Consumer Advocate is bound by the law to represent the interests of the general public. Life of the Land believes that the interest of the general public, as perceived by the CA, is the delivery of electricity at the cheapest cost. Life of the Land is concerned with environmental impacts.

9) Whether the applicant's position is in support of or in opposition to the relief sought. Life of the Land opposes this submission. LOL supports alternative approaches, including increased DG, CHP, DSM and increased maintenance. We urge this Commission to accept our intervention to address this very fundamental pending issue.

Q) HECO has requested three copies of our Motion To Intervene (Application, pages 2-3). Although the Rules of the PUC require us to submit only one copy[24], we will comply with HECO's wish and send deliver three copies.

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[24]HAR §6-61-21 Service of process. (b) The commission or any person filing documents shall serve a copy upon each party or its attorney and shall attach a certificate of service on the filed original. ... (d) Service upon a party, other than the commission, shall be deemed complete upon the occurrence of at least one of the following: (1) The party or its attorney is personally served; (2) The document is delivered to the party's office or its attorney's office and left with some responsible person; or (3) The document is properly stamped, addressed, and mailed to the last known address of the party on file with the commission or to its attorney.

CONCLUSION

For the above stated reasons Life of the Land respectfully request that the Commission grant our Motion to Intervene.

Dated January 6, 2004

Henry Q Curtis

Henry Q Curtis
VICE PRESIDENT FOR CONSUMER ISSUES
LIFE OF THE LAND

Certificate of Service

I hereby certify that I have this date served a copy of the foregoing Motion to Intervene by Life of the Land, Docket Number 03-417, upon the following parties. The original and 8 copies to the PUC. Two copies to the Consumer Advocate. Three copies to HECO.

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Dated January 6, 2004

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